

Frank G. Carpenter Amid the Andean Glaciers

Copyright, 1914, by Frank G. Carpenter.

COCHICO, Peru—I am writing this letter on an oil-burning engine on the very top of the Andes. My secretary sits by my side in the cab and takes down the notes. The air is so rare that I can hardly talk, and it is only the great flames of petroleum in the furnace below that take the chill from our bones. We are a short distance from Tiello, above the pass which crosses the mountains from the Pacific ocean on the way to the Atlantic, and at the very highest railroad point in the world. We are higher up in the air than any mountains in the United States outside of Alaska. We are 100 feet above the top of Mount Blanc and 2,000 feet higher than the sacred peak of Fujiyama, in far-off Japan. If I could fly on this plane north to Pike's peak I should have to drop three times the height of the Washington monument before I could land on its summit, and if I fell 1,000 feet I should still be far above the height of Mount Whitney.

Our actual altitude is 15,965 feet above the sea, and all about us are mountains that rise several thousand feet higher. Over there is Mount Meigs, whose altitude is over 12,000 feet, and not far away is another mountain that ascends to 20,000 and more.

As I write we seem to be in a great fortification on the very roof of the world. We are in a basin surrounded by gigantic walls of blue, black, white, red and gray rock. We are also in a great glacier garden. I can count a half dozen mighty ice rivers where I am sitting, and there are glaciers so near that I could almost throw a stone in the ice as I stand up in the cab.

Beautiful Scenery.
A moment ago the sky was bright blue; now the wind has come up and the clouds hang low over the glaciers. The black masses rest on the ice, and it seems to be flowing out of the clouds down the hills. Some of the glaciers are of enormous extent. I can see one that seems to be the whole top of the mountain, and near it another has burst out of the rocks and half fallen in an icy veil down to the valley. The top of that glacier is covered with snow, but the face toward which the train is this veil of ice, through which you can see the ice wall behind. We have here the sun of the tropics; it fights with the cold of the highlands, and the battle goes on all the time. You can never be sure of the weather; it may be clear for a week and it may snow day and night. In the winter the mountain blasts are so fierce and the glare so great that the trainmen use smoked glasses to keep from becoming snow blind.

Steep Climb.
But before I describe the scenic wonders about me let me tell you something of this road from the sea to the clouds. It is the world's greatest wonder in the way of railway construction. It begins on the Pacific ocean at the port of Callao, and in 100 miles it climbs up the mountains to an altitude of 15,965 feet; it crosses the pass at 200 feet lower and then goes down to the Indian market town of Oroya on the other side of the range. Oroya is not a great distance from the navigable tributaries of the Amazon river, and the day will probably come when this road will form a part of a steam route across South America. Leaving Lima for this 100 miles the track steadily rises. From the sea to the top of the pass the average grade is about 4 per cent; and there is no place where a train or a car, if left on the main track, would not slide by gravity clear down into the ocean. The road is of standard gauge, and the engines burn fuel oil, which comes from northern Peru, and the journey throughout is accomplished without dust or cinders. The system of brakes, which assures safety, is both British and American, and in the descent a pilot car always goes in advance of the train.

Owled by Government.
This road is known as the Central Railway of Peru. It belongs to the government and is under the management of the Peruvian Corporation, a British company that has control of the railways of the republic. The railway runs from Callao, on the Pacific, to Huancayo, 270 miles distant, on the Atlantic side of the Andes. It crosses the coast range at 15,466 feet, with a branch of nine miles to the Morococha mines, upon which the altitude is almost 16,000 feet. The road was suggested by a Peruvian, but the man who laid it out and constructed the greater part of it was Henry Meigs, an American. Meigs raised the money to build it, and, in fact, he is entitled to the credit of its construction. He began to work on it away back in 1870, and in 1876, when he died, he had completed it as far as Chicla, a point more than two and one-half

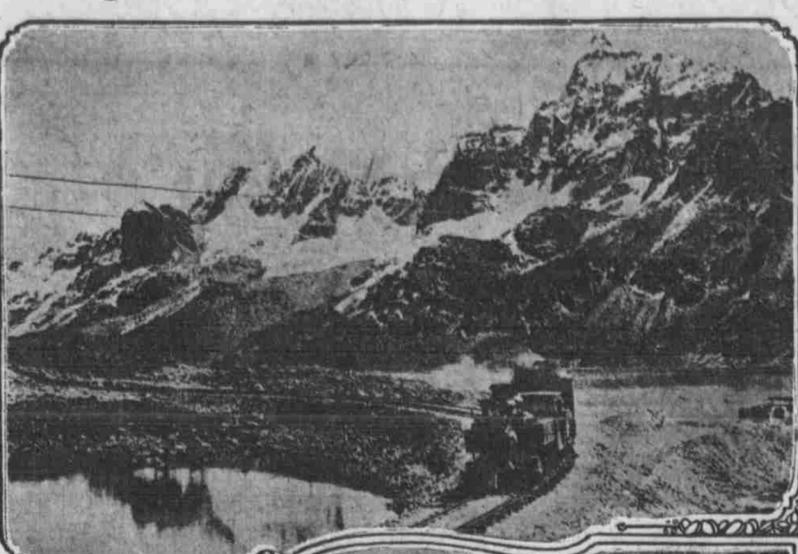
miles above the sea. By that time the \$7,000,000 or \$75,000,000 which he had raised for its construction was exhausted and the work stopped. It was resumed some years later, and in 1893 was completed to Oroya, a distance of 133 miles from the coast. The extension to the rich valley of Huancayo was finished only six years ago.

The road was originally planned to reach the rich silver and copper mines of Cerro de Pasco, but after going over the pass at an altitude of 15,965 feet, it came down about 5,000 feet and stopped at Oroya. Then the mines were bought by an American syndicate, and this syndicate has built a standard gauge railway from Oroya, along the high plateau of the Andes to its mining center, which is still at an altitude of 14,200 feet. I expect to go over that road within a few days and shall write of it later.

Great Engineering Feat.
The Central railway of Peru is considered by experts the most wonderful piece of railroad engineering ever carried. It reaches the highest point ever crossed by rail, and its course from the sea to the top of the mountains is almost straight up into the air. The distance as the crow flies from the Morococha pass to the ocean cannot, I should say, be fifty miles, and, with all the windings of the road, with its loops, twists and turns, its zigzags and its tunnels and its other contrivances by which it climbs up this wild part of the world it is only 100 miles. All of this is accomplished without the rack or pinion or cog systems used on other high roads, and that with a grade of only about 4 per cent. There is not one inch of down grade from the sea to the top, and the heavy cars must climb all the way up.

The route for the road is the valley of the Rimac river, a rushing stream of snow water which bursts forth from the glaciers of the high Andes, and rolls over rocks, through gorges, a mass of white foam all the way to the sea. In places the road is high above the river, clinging to the sides of the hills; again it is on the river level; and at one point where the space was not wide enough for both road and river the engineers made a tunnel through the mountains and turned the stream out of its course to use its bed for the track.

In coming up the mountains, you pass through tunnel after tunnel and over bridges of steel, which span dizzy gorges. There are altogether sixty-five tunnels and sixty-seven bridges in this 100-mile trip; and there are sixteen switchbacks located on the sides of the mountains where the road could climb in no other way.



Climbing one of the grades, 15,965 feet above sea level.



Central Railway up the Andes, showing system of switchbacks.

thereupon asked me to try it. "But will this do the business?" said I. "I don't know," he replied, "but if not, I have a sure cure here." And he thereupon opened his bag and showed me the revolver.

This last, I am told, is about the only safe cure for soroch. The doctors can do nothing to help you, and every one is sure to get it if he stays long on the tops of the Andes. One may have it again and again, and any indiscretion may bring on an attack. I doubt not I shall be more afflicted as I go on with this journey, but I shall keep out in the fresh air and I hope to get through.

Steep Walls.
I despair of making you see all the wonders of our trip up the mountains. The long chain of the Andes walls the whole side of this continent. It begins at Cape Horn and the firths of the Strait of Magellan and goes north crawling close to the coast in a great winding rampart for a distance of 4,500 miles, when it drops down into our cut of Culebra on the Isthmus of Panama, throughout the whole length, except at the top and the bottom, this chain has peaks which are three or four miles in height. Its average elevation is more than 12,000 feet, or almost the height of Fujiyama, Japan. Mount Aconcagua, in Chile, is about 23,000; Mount Misti, in southern Peru, is over 20,000, and there is a peak, within sight of my eyes, that is 21,000 and more. North of here, in Ecuador, are many volcanoes, including Chimborazo, more than four miles in height; and south of me, in Bolivia, is a plateau which has an average altitude of 13,000 feet, with no drainage to either the Atlantic or the Pacific.

The striking altitudes are the more impressive on account of the steepness of the range which runs along the coast. It begins right at the sea, only a narrow strip of sand separating it from the ocean, and it jumps, as it were, into the clouds. I rode this morning through Lima, a city of perhaps 150,000. It is situated on the banks of the Rimac, close to the gorge into which we started as we came up the mountains.

Fertile Valleys.
During the first part of our journey we passed through an irrigated valley. There are fields of alfalfa, sugar cane and other green crops on both sides of the railroad, but the mountains over the valley were as arid as the Sahara. I remember I thought of the difference between the two sides of the Andes, and that if I could bore a hole right through the desert wall I might come out into the region of the Amazon, where the waters swarm with turtles and alligators, and where the vegetation is a dense jungle with palms, rubber trees and all sorts of tropical fruits. On this side of the mountains there is no rain and everything is dry. On the other side it rains all the time. The Rimac river here is not fed by the rains. It comes from the snows, which the winds from the east have left on the tops of the Andes.

The vegetation of the arid Andes is remarkable. I sat on the rear platform of the car and dictated my notes as we wound our way up the cliffs. Near the ocean there was no green at all. The mighty rocks seemed perfectly bare and there was no soil or any green thing. By looking closely, however, I found gray cacti clinging to the rocks and

silver-gray moss like a mantle. These plants were probably fed by the dew. It was not until we reached Tamboque, at an altitude of almost two miles, that we found our first sprinkling of green. There the rocks seemed dusted with emeralds, and the green grew fresher and more abundant from there to the tops of the mountains. At two miles and a half I found the Andes covered with a thin grass, and where I am now, at the beginning of the great plateau that is upheld by two of the ranges which run through Peru, there is plenty of feed for llamas and sheep. Within the last three or four hours we have passed many wild flowers. At one place I encountered forty varieties and from where I am sitting I can see buttercups without numbers and great yellow dandelions are looking at me through their yellow eyes out of the rocks.

Mountain Fields.
The greater part of the way up the mountains we were near to or high above the Rimac river. The valley narrows and widens. In some places you could jump from one side of it to the other, and again it is so wide that it would take half an hour to cross it. All along through the valley there are patches of crops. There are little fields of alfalfa, not as big as a bed quilt, and terraces which run step by step up the sides of the mountains, all covered with green. Every bit of available land is used. The stones are picked off and the walls are built round little patches of soil not as large as the hotel dining table.

The valley of the Rimac is quite wide near the ocean, and there you see cattle and sheep. There are some large fields with mud walls about them, and also haciendas with comfortable buildings.

As we go further into the mountains the fields grow smaller and smaller. All the farming is by irrigation, and that in terraces where the strips of cultivation are often only three or four feet in width. Nevertheless, these little farms run far up the mountains. I am told that a workman fell out of a field recently and rolled down fifty feet. Above these terraces are the marks of other terraces which were once used by the Incas. They

cloudy, full of sediment, channels often overflow, water scalds and you are obliged to seek relief two or three times during the night.

All the way from the ocean to the tops of the Andes we passed towns and villages. At the sea is the port of Callao, on one of the finest harbors of the west coast. Seven miles further inland lies the city of the Kings, the Peruvian capital of Lima, and going on up the valley, at an altitude of 2,000 feet, you stop at Chocoma, a summer resort, where a score of big Cholo women, clad in short skirts and shawls and white Panama hats, stand on the station platform, selling oranges, tomatoes, peaches, watermelons and strawberries. I there bought six oranges at 3 cents apiece, and an alligator pear that weighed a pound for a nickel. Hither still we came to the towns of the Indians. Here the houses were all of one story, the most of them being rude stone huts thatched with straw. The people do not build in the fields, for the land is too valuable there. They huddle together on the edges of the valley or on the rocky places close to the river. They go out to work on the terraces and patches of soil, and you now and then see them driving the llamas loaded with burdens over the trails. Here they are herding sheep, standing up and spinning wool as they do so, and there bending over digging the soil. They are short and copper colored, and they look worked to death.

A Native Meal.
We stopped at Matucana for dinner, being served with plates of soup containing chunks of meat as big as your fist, and a half dozen vegetables all stewed together. We had also beefsteak and eggs, and red strawberries fresh from the vines.

Here and there along the trip we passed mining towns and we stopped a while at Casapalca, where the great smelter of Backus & Johnson sends volumes of sulphur into the air. Much of the ore is brought in by llamas, and we saw hundreds of these little camel-like beasts trotting along with their loads of silver and copper.

Casapalca is 13,000 feet high, and the climb from here to Tiello is more than 2,000 feet. Just below Tiello is the Glera tunnel that goes through Mount Meigs to the other slope of the mountains. At that point you can see the streams flowing both ways, and can stand on one place and throw chips into waters that flow to both oceans. I know of this, and had prepared two small bottles with messages in them. They were tightly corked. I put one in each stream and set them adrift. One of these bottles floated away down the eastern side of the Andes. It may reach the Usayal, one of the tributaries of the Amazon, and go on its long voyage of three or four thousand miles into the salt water of the Atlantic. The other floated rapidly toward the Pacific. It will soon reach the Rimac river, and if it can withstand the rocks it will be at Callao in something less than a 100-mile journey.

Meat forms uric acid, which clogs kidneys, irritates bladder or causes Rheumatism.
When you wake up with backache and dull misery in the kidney region it generally means you have been eating too much meat, says a well-known authority. Meat forms uric acid which overworks the kidneys in their effort to filter it from the blood and they become sort of paralyzed and lousy. When your kidneys get sluggish and slow you must relieve them, like you relieve your bowels; removing all the body's urinous waste, else you have backache, sick headache, dizziness, your stomach sours, tongue is coated, and when the weather is bad you have rheumatic twinges. The urine is

filled 100 acres where modern Peru tills one.

FRANK G. CARPENTER.

Conference to Make Rules for Policing Spitzbergen Isles

CHRISTIANIA, March 14.—The Arctic islands of Spitzbergen, uninhabited and almost unexplored, the resort of whalers and walrus hunters and the only place within the Arctic circle visited by tourists, are this summer to engage the attention of the powers, including the United States, in an effort officially to declare them neutral and provide for their policing during the summer months, when lawlessness on the part of the crews of visiting whalers and seal hunters has been increasing.

No power ever has made a serious claim to Spitzbergen, the mountainous islands north of Norway and northeast of Greenland having been regarded as almost valueless. But the discovery of coal, which is being worked principally by American capital, has completely changed the outlook, and incidentally brought the United States into the group of powers whose voices are to be heard concerning the future of the islands.

Two international conferences will be held before July. Early in June representatives of Russia, Sweden and Norway will meet at Christiania to draw up proposals to be submitted to the general conference to be held two weeks later.

Great Britain, France, Holland, Germany, Denmark and the United States will be represented in the general conference. The United States having been invited because of the coal interests of American citizens there.

PROPOSED PLUMAGE BILL IS POPULAR IN LONDON
LONDON, March 14.—A petition in favor of the plumage bill to be presented to the House of Commons has been signed by 21,585 persons who visited the Bird court of the exhibition of Australian manufacturers last fall. So strong is Australian opinion in favor of the bill that it is stated in official circles that had the petition been circulated publicly it would undoubtedly have been signed by 96 per cent of the population.

This intense feeling is due, apart from humanitarian reasons, to the conviction that systematic slaughter of birds for the plumage market is having a most detrimental effect upon agriculture. Public opinion is also incensed by the fact that prohibited skins and feathers are smuggled out of the country in spite of the vigilance of the authorities, and it is recognized that only the closure of the home markets can effectually put an end to the traffic.

BURGESS-NASH CO.
"EVERYBODY'S STORE"
Announcing in Advance for
TUESDAY
A Most Unusual Sale of
Framed Pictures
Involving Values of \$2.50 to \$5, Choice
\$1.00
THE sale includes carbon prints, landscapes, historical and marine scenes; the frames are very elaborate, imitation Circassian walnut and lacquered finish with burnished ornaments. Frames alone worth several times the price asked. Oblong, oval and upright styles; sizes 16x20 to 18x40 inches.
For full particulars, see 16th street windows and Monday evening papers.

Health and Beauty Hints
BY MRS. MAE MARTYN

A. D. C.: That itching and pruritic dandruff plainly indicate an unhealthy scalp, and when this condition is overcome your hair will take on its former richness and beauty. Shampooing occasionally with a teaspoonful of castor oil dissolved in a cup of hot water cleanses and invigorates the scalp and results in healthy, beautiful hair. This shampoo is very inexpensive and you will not only enjoy each shampoo, but the results will be very gratifying.

Janet: You and your husband both can easily get rid of the surplus fat if you follow these simple directions: Get 4 ounces paraffin from your druggist and dissolve in 1 1/2 pints hot water; when it cools take a tablespoonful before each meal. This reduction method is gradual and positive in its action and does not depend on diet or exercise for results. The skin will be left firm and free from wrinkles.

Inquilitiv: Your pimples and allow complexion are caused by impurities in your system. Try this old-time blood purifier and tonic and I am sure you will obtain excellent results: To 1/2 pint alcohol add 1 ounce karene (from drug store), then 1/2 cupful sugar and hot water to make a full quart. Take a tablespoonful before each meal and your skin will grow clear and the color of health will come back to your cheeks. This tonic is good for aches and ills prevalent in cold weather and tends to cleanse body of poisons causing rheumatism and kidney and liver troubles.

Herm: I think all eyes are beautiful clear and sparkling and all eyes may be that if cared for properly. I put 2 or 3 drops of my simple home-made tonic into each eye daily. When they are tired or the lids show any tendency to inflammation, I use oftener or bathe entire eye and lids. To make the tonic I get an ounce of crystals at the drug store and dissolve it in a pint of clear, cold water.

Annabell: To be sure you can have a clear, velvety, pink-and-white complexion if you are enough to give it a little attention each day. I advise cleansing powder and using a plain lotion made by dissolving 4 ounces spermacet (get from druggist) in 1/2 ounce 95 per cent alcohol and water, to which should be added 2 teaspoonfuls glycerine. This is easily applied, dries quickly and imparts a delightful tone to the complexion. Especially good for oily, sallow skins and cannot be detected when on.

Pearl: Your wrinkles might be caused in many different ways, but without regard to the cause, I am giving you a certain relief which my friends and I have proven. This is inexpensive and is made as follows: Into 1/2 pint water, stir an ounce ammonium iron sulphate and add 2 teaspoonfuls glycerine. Apply the cream plentifully on retiring and massage well into the skin, then in the morning wash off and apply a little more. A few such treatments will soon clear the skin of wrinkles and give you a velvety complexion.

Clara M.: You can help nature beautify your hair by keeping your scalp perfectly healthy and free from dandruff or itching. Make your own tonic and massage into the scalp and hair roots once or twice a week. I use 1/2 pint of alcohol, to which I add 1 ounce ammonium iron sulphate. This quinine tonic soon puts the scalp in its healthy, pliant condition, overcomes dandruff and itching and gives to the hair roots the strength necessary to produce a luxuriant growth of long, brilliant hair.

Cor: Objectionable fuzzy or hairy growths are easily banished if you mix enough powdered deatone with water to form a thick paste, and apply to hairy surface for 2 or 3 minutes. Then rub off with the skin and over trace of hair is gone. Excepting in very aggravated cases, one application of deatone is enough. No harm will result, but certainly you get detestation.

Read Mrs. Martyn's book, "Beauty," \$1. Advertisement.

The Modern Style Cedar Chest
as made by the Luger Furniture Company, is the lower drawer of dresser or chiffonier thus combining two articles of furniture in one, and saving the extra cost of a cedar chest. This feature of
Luger "Cedar-Line" Dressers and Chiffoniers
is especially appreciated by those living in modern apartments where space is limited.
Among the other strong features of the Luger Cedar-Line are the easy working drawers, the inter-locking construction and 3-ply, easle-back which make for rigidity and durability, the dust-proof, mouse-proof bottom, etc. Luger Dressers and Chiffoniers cost nothing extra because of these valuable features. Why be satisfied with any other? Write us if your furniture dealer doesn't handle them.
Luger Furniture Company
Minneapolis, Minn.

ITCHING ECZEMA SOMETHING FIERCE
Covered Face, Ashamed to Go Away from Home, Broke Out as Rash, Cuticura Soap and Ointment Cured.
Elin Green, Ind.—"When but a young girl my face broke out with eczema and kept getting worse. I went to go away from home. The trouble broke out as a rash and covered the most of my face, especially the chin and cheeks. The itching and burning were something fierce causing me to rub it which caused it to spread. When out in the wind the burning was worse than ever.
I tried ——— and Ointment without the desired effect. I had suffered with it for several years until finally I commenced using Cuticura Soap and Ointment. After using them for a month or more I could feel a great change in my face. I continued using Cuticura Soap and Ointment for a year and was entirely cured." (Signed) Mrs. Ruby Sponsler, June 13, 1913.
For pimples and blackheads the following is a most effective and economical treatment: Gently smear the affected parts with Cuticura Ointment, on the end of the finger, but do not rub. Wash off the Cuticura Ointment in five minutes with Cuticura Soap and hot water and continue bathing for some minutes. This treatment is best on rising and retiring. At other times use Cuticura Soap freely for the toilet and bath, to assist in preventing inflammation, irritation and clogging of the pores. Sold throughout the world. Sample of each mailed free, with 100-page Skin Book. Address postpaid, "Cuticura," Dept. T, Boston.
"If you who shave and shampoo with Cuticura Soap will find best for skin and scalp."

"Live Wire" Business Men of Omaha
Telephone Numbers and Addresses of the Omaha Business Houses
File this for reference, you will find it handy.
For Complete Information See Classified Section of
TODAY'S BEE